

Abstract of the Disclosure

A unitary body of optical material and associated methods for reading indicia such as bar codes is provided. The unitary body can focus light from a light source into a beam, redirect light reflected from a target to a photodetector, and provide mechanical support for a light source, printed circuit board, or other indicia reader components. In comparison to conventional apparatus, the unitary body requires a reduced number of components and is therefore easier and less expensive to manufacture and assemble. The unitary design increases reliability and performance consistency while decreasing sensitivity to thermal and mechanical loading. Moreover, the unitary body reduces the overall tolerance budget of a reader and therefore facilitates mass production of optical apparatus and readers. The unitary body and associated methods may be implemented in a compact reader with the aforementioned advantages in the form of a pen, or can be integrated into an antenna of a wireless device, such as a cell phone or a PDA.